

Delta RMP Steering Committee Meeting

January 14, 2014

9:00 AM – 12:00 PM

Sacramento Regional County Sanitation District Building

Sunset Maple Room




10060 Goethe Road, Sacramento, CA 95827




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Draft Agenda

1.	Introductions Establish quorum		9:00 Brock Bernstein
2.	Announcements from Committee Members		9:05
3.	Approve Agenda and Summary (Attachment) Agree on agenda and approve summary of prior meeting	 Draft Summary SC 2013Dec2.doc  Revised Panel Summary.doc	9:10 Brock Bernstein
4.	Decision: Assessment Questions The goal of this discussion is to reach agreement on the assessment questions that will be the starting point for the work of the TAC. <u>Desired outcome:</u> <ul style="list-style-type: none">- Final draft assessment questions to initiate the work of the TAC	 Assessment questions.doc	9:15 Brock Bernstein

5.	<p>Decision: Outline of TAC Charter</p> <p>Several governance documents were revised to incorporate outcomes from the Dec 2 discussion about the TAC's role and responsibilities.</p> <p><u>Desired outcomes:</u></p> <ul style="list-style-type: none"> - Approve revised guiding principles and committee roles 	 Approved Guiding Principles.doc  Committee Roles 13-12-05.doc	10:15 Brock Bernstein
6.	<p>Decision: Charge to TAC</p> <p>The goal is to provide the needed guidance for convening a TAC.</p> <p><u>Desired outcomes:</u></p> <ul style="list-style-type: none"> - Approved TAC charge - Agree on next steps for the TAC 	 Draft TAC Assignment.doc	10:45 Brock Bernstein
7.	<p>Updates</p> <ol style="list-style-type: none"> 1. Regional background characterization 		11:15 Linda Dorn LWA consultants
8.	<p>Information items</p> <ol style="list-style-type: none"> 1. <i>Delta Regional Data Center Proposal:</i> the Delta Conservancy, in partnership with the Delta Science Program, Aquatic Science Center, and IEP have submitted a proposal to USEPA's Exchange Network Grant Program to initiate a Delta Regional Data Center. 2. <i>Estuary Portal:</i> SFWCA is proposing to create web pages as part of the Estuary portal to display Delta RMP data along with other data sets (IEP, CEDEN, CDEC). It would take about 20 minutes to show the portal and the SJR site. 		11:30 Shakoora Azimi-Gaylon Val Connor/34 North
9.	<p>Plus/Delta, set dates and agenda topics for upcoming meetings</p>		11:55 Brock Bernstein
10.	<p>Adjourn</p>		12:00

Delta RMP Steering Committee Meeting

December 2, 2013

9:00 AM – 12:00 PM

Sacramento Regional County Sanitation District Building

Sunset Maple Room

10060 Goethe Road, Sacramento, CA 95827

Draft Summary

Attendees:

Voting Steering Committee (and/or Alternate) members present¹:

Kenneth Landau, Regulatory – State (Central Valley Water Board)

Mike Wackman, Agriculture (San Joaquin County and Delta Water Quality Coalition)

Casey Wichert, POTWs (City of Brentwood)

Dave Tamayo, Stormwater, Phase I Communities (Sacramento Stormwater Quality Partnership)

Tim Vendlinski, Regulatory – Federal (USEPA)

Linda Dorn, POTWs (SRCSD)

Tony Pirondini, Alternate–POTWs (City of Vacaville)

Stephanie Fong, Alternate–Water Supply (SFCWA)

By phone:

Gregg Erickson, Coordinated Monitoring (IEP/CDFW)

Stephanie Reyna-Hiestand, Stormwater, Phase II Communities (City of Tracy)

Others present:

Brock Bernstein, Facilitator

Thomas Jabusch, SFEI-ASC

Brian Laurensen, LWA

¹ *Name, Representation (Affiliation)*

Meghan Sullivan, Central Valley Water Board

Joe Domagalski, USGS

Patrick Morris, Central Valley Water Board

Jay Davis, SFEI-ASC

Dalia Fadl, City of Sacramento

Vyomini Upadhyay, SRCSD

Debbie Webster, CVCWA

Stephen Clark, Pacific EcoRisk

Jason Lofton, SRCSD

Rachel Kubiak, Western Plant Health Association

Larry Lloyd, Sutter County RCD

Tessa Fojut, Central Valley Water Board

Elaine Archibald, CUWA

Tom Grovhoug, LWA

On phone:

Karen Ashby, LWA

Stephen McCord, MEI

Mike Mosley (Reclamation)

1.	Introductions A quorum was established.
2.	Announcements from Committee Members Ken Landau mentioned that he had conversations with DWR managers about the Delta RMP. The DWR managers did express interest in the RMP and potentially filling the vacant Resources seat. Various DWR branches are involved in monitoring and managing water resources in the Delta and now have to find out more about what the Delta RMP is doing, decide who will get involved, and which section is most appropriate to represent DWR at the committee level. DWR will get back to Ken or Meghan Sullivan. Jay Davis announced a change in personnel at SFEI-ASC: Interim Executive Director

	Meredith Williams resigned and the Interim Director position is being filled. SFEI-ASC has also begun a search for a permanent Executive Director.
3.	<p>Approve Agenda and Minutes</p> <p>Agenda and minutes were approved. Tim Vendlinski provided an edit to the panel summary.</p>
4.	<p>Decision: Initial RMP priorities</p> <p>The outcomes from this discussion were largely influenced by the outcomes of the discharger group's SC pre-meeting coordination call. Participants in this group highlighted the need to give more consideration to the coordination aspects of each of the constituents that had been proposed (methylmercury, nutrients, pathogens, pesticides/toxicity). Each one has its different coordination needs and potential partners it would involve. For that reason, Linda Dorn recommended keeping all priority constituents in for now. She further suggested taking a look at the physical locations of interest, since the number of sampling locations (as opposed to the constituent list) is a major contributor to the overall cost of monitoring. Dischargers are in the process of identifying a proposed network of preferred monitoring locations that would meet their NPDES compliance needs and also provide a starting point for the RMP. Consultants are still working on it but it already became evident that there are some locations that need to be included to meet the monitoring needs of dischargers.</p> <p>Brock Bernstein described two overlays that are needed to identify monitoring locations for the RMP: the ideal monitoring designs for all constituents 1) with each other and 2) with the existing monitoring. Then, identifying locations would be a matter of making some tradeoffs, with scientists and managers involved in the discussion. The way forward could be to design the ambient characterization, see what it looks like in terms of sites, and figure out what is involved before taking any constituents out. He also suggested that the RMP would want to build knobs to turn into the design (e.g., number of sites, sampling frequency, constituent lists) so that the design could be adjusted as needed as resources change.</p> <p><u>Outcomes:</u></p> <ul style="list-style-type: none"> – Move forward with planning and a design process for all issues presently on the table: methylmercury, nutrients, pathogens (Cryptosporidium/Giardia), and pesticides/toxicity

	<ul style="list-style-type: none"> – Refine management questions for all issues – Provide a charge to the TAC to <ul style="list-style-type: none"> • Further refine the management questions developed by the Steering Committee • Develop a monitoring design that looks at ambient conditions at the scale of the Delta • Identify opportunities for coordination (based on updated materials describing and mapping existing monitoring that have been developed by ASC) • Bring back a recommended approach
5.	<p>Decision: Outline of TAC Charter</p> <p>Previous discussions indicated the need to better define expectations, roles, and responsibilities of the TAC. Jay Davis reiterated that one of the most important things to do at this point is to identify where the management needs are and focus on them. A widely supported proposal for a process for forming the TAC emerged as follows: A) structure on top: each designated SC seat designates one person to sit on the TAC in a more permanent manner in a one to one relationship; B) flexibility on bottom to add subgroups and experts as appropriate: if there is need for additional expertise, expert subgroups could be formed that can report to the TAC; C) if the TAC chair foresee a need for additional horsepower on the TAC, they would come back to the SC with a recommendation.</p> <p>Tim Vendlinski and Stephanie Fong suggested that existing workgroups could serve as subgroups, i.e. the Delta Tributaries Mercury Council (DTMC, chair: Stephen McCord), the IEP POD Contaminants Work Team (CWT, chair: Stephanie Fong), and the Central Valley Drinking Water Policy Workgroup. Brock Bernstein proposed moving forward by identifying how to coordinate with the other groups.</p> <p>Brock then laid out conceptually how the TAC could work and interact with the other entities (SC and ASC). He envisioned the TAC as being made up of experts (i.e., practitioners that staff the boat and sample the Delta) that will provide more detail for decisions. Specifically, the TAC would be expected to come back with an actual program design that will also describe specifically how the Delta RMP and partners such as the IEP will practically implement the monitoring. The SC and ASC would make funding decisions for the implementation based on operational agreements that will be put in writing. Formal processes will be important, because</p>

	<p>“people get more worried about checks and balances when policy decisions get made”.</p> <p>Finally, Brock pointed out that the SC would need to give a clear charge to the TAC. He suggested that in addition to other materials to send out (see Action Item 7.1), staff (Thomas Jabusch, Meghan Sullivan, Brock Bernstein) would take a crack at putting a draft charge together (1-2 paragraphs) that the SC and other meeting participants would review as to whether it gives enough guidance, and tweak as needed.</p> <p>Also raised was the question of funding the TAC co-chairs. Joe Domagalski’s participation is covered by USGS through next summer. Dave Tamayo stated that Sacramento County has contracts in place that can give some funding to Stephen McCord. However, he still needs to ask managers and also needs assurance that his constituency will be credited for such an arrangement.</p> <p>The discussion turned to ASC’s role in the program vis-a-vis the TAC. Brock advised that utilizing ASC resources versus TAC contributions would be a balancing act. It will involve ASC, TAC, and TAC co-chairs mutually reviewing any plans, proposals, and products. Ultimately, ASC and the TAC will have to come to the SC for decisions regarding funding. Linda Dorn suggested the San Francisco Bay Nutrient Strategy as a model, where SFEI-ASC functions as the science manager and is in a role between the SC and TAC. The new structure of the San Francisco Bay Nutrient Strategy acknowledges SFEI-ASC as the science manager, making explicit the role already served in the Bay RMP for many years. Thus, Linda suggested ASC would function as a third part/arm of the program governance.</p> <p><u>Next Steps:</u></p> <ul style="list-style-type: none"> – Agree on TAC formation and charge – TAC co-chairs with ASC and Regional Board staff digging in to assignments – Figuring out TAC meeting structure and moving forward without getting bogged down
7.	<p>Next meeting</p> <p>The next meeting will be on January 14, 2014. The tentative meeting location is the Sacramento Regional County Sanitation District (9am-12pm).</p>
8.	

	<p>Action items:</p> <ul style="list-style-type: none"> 7.1. Staff will send out original documents on governance etc. with track changes to capture agreements from the TAC discussion and include language on TAC structure and flexibility (due: Dec 10) 7.2. SC to review edited governance documents and description of the charge of the TAC (due: Jan 10) 7.3. SC to nominate TAC members (each SC seat nominates one TAC member)(due: Jan 2) 7.4. Linda Dorn to confirm meeting room availability at SRCSD (due: Jan 2)
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Panel Discussion Summary: October 10 Delta RMP SC Meeting

The purpose of the panel was to discuss some of the challenges and opportunities of developing and implementing a regional monitoring program with participants of the San Francisco Bay RMP and the Southern California Bight Program, to understand the thinking and concerns related to various decisions, including governance, participation, and program design from the perspective of long-term participants. The panelists were

- Kevin Buchan
Western States Petroleum Association (WSPA)
- Joe Gully
Los Angeles County Sanitation District (LACSD)
- Adam Olivieri
Bay Area Stormwater Management Agencies Association (BASMAA)
- Ken Schiff
Southern California Coastal Water Research Project (SCCWRP)
- Dave Williams
Bay Area Clean Water Agencies (BACWA)

The panel discussion started with introductory statements by each of the panelists, followed by a Q&A style discussion in which they addressed questions of the Delta RMP Steering Committee members. The summary of the conversation is organized around a short-list of questions that has previously been put together by program staff, with guidance from the Steering Committee.

The U.S. Environmental Protection Agency and the Central Valley Regional Water Quality Control Board provided support for the panel discussion. Brock Bernstein was the moderator.

Thomas Jabusch (San Francisco Estuary Institute-Aquatic Science Center, thomas@aquaticscience.org) prepared the summary.

Introductory Statements

How are you involved in regional monitoring and what role are you playing in your program?

Adam Olivieri: I serve on the board of the San Francisco Estuary Institute (SFEI) and BASMAA and have been with the Bay RMP for 20 years. I'm a member of the San Francisco Bay RMP Steering Committee.

Joe Gully: My background in regional monitoring includes serving on various technical, planning, and oversight committees for the Bight Regional Monitoring Surveys since 2003, chairing of the Central Region Kelp Survey Consortium from 2005-2010, and co-authoring the Santa Monica Bay Restoration Commission's Comprehensive Monitoring Program released in 2007. I'm also knowledgeable regarding the implementation of the San Gabriel River Regional Monitoring Program initiated through NPDES permit requirements at several Sanitation Districts water reclamation plants.

LACSD participates in 4 major regional RMPs that we implement through permits: the Southern California Bight Regional Aerial Kelp Survey, the Bight Monitoring Survey, the Comprehensive Monitoring Program for Santa Monica Bay, and the San Gabriel River RMP. Our total funding for the San Gabriel River RMPs is \$400,000 per year, which also accounts for associated administrative costs. Administrative costs need to be accounted for.

Ken Schiff: I'm the Deputy Director for SCCWRP and have been coordinating and facilitating southern California Regional Marine Monitoring (aka "the Bight Program") since 1994.

Dave Williams: The San Francisco Bay RMP was initiated in the early 1990s. I was the Director of Wastewater at the East Bay Municipal Utilities District (EBMUD) for 20 years and was responsible for budgeting for the program, providing monitoring results that served as the basis for cost allocations for the program, and had staff involved at various times in technical aspects of the RMP. Having left EBMUD, I am now the Executive Director of BACWA, which has significant interests in the RMP as it relates to gathering data, which often is utilized to help establish regulations.

Kevin Buchan: I represent 5 refineries in the Bay Area and chaired the Bay RMP Steering Committee for 9 years from 2000 to 2009.

What point would you like to make with regards to regional monitoring/what is your key message/take-home message to the Delta RMP SC?

Adam Olivieri: The Bay RMP has been very successful, is a scientifically sound program that involves monitoring plus research (e.g., contaminants of emerging concern) and produces objective information. Participating in the RMP allowed dischargers to be very collaborative on

permit-driven monitoring requirements and helped more clearly communicating with the Regional Board about what the management priorities are.

Ken Schiff: There are four things all participants across all program areas of the Bight Program get in common: 1) Holistic picture of the environment. For example, all dischargers know a lot about their individual discharge, but little about the environment as a whole. 2) The regional program provides context and focus and also allows exploring new opportunities and issues without needing permit requirements in place. 3) Training and education, both formal and via exposure to other experts. 4) The biggest advantage of participating is communication and interaction with peers and regulators and cross-communication among the various interest groups.

Kevin Buchan: The Bay RMP has continued to accomplish its goals, and is valuable for the regulated community. It now is an instituted program and at the same time there is a good process in place for prioritizing projects, for deciding what projects go forward and what projects don't. Everybody at the Steering Committee gets an equal vote, including the Regional Board, even though the Regional Board could leverage its authority. The budget is prudent and funded projects are justified. The RMP budget provides predictability to the regulated community.

Joe Gully: I concur that there is lots of value in participating in a RMP from a discharger perspective. Collaborative regional monitoring provides a good platform for exchanging information and can be a very powerful tool for addressing management priorities.

Dave Williams: The Bay RMP was a regulatory requirement, which in itself is not desirable from a discharger perspective, especially if it is a cost factor. The Bay RMP involves considerable investment by the participants and these funds need to be budgeted. However, ratepayers value the Bay as a resource and the RMP provides an invaluable database.

Governance and Decision-making

What was the driver to form the RMP? How did the program evolve?

Joe Gully: The Bight Program started as an ad-hoc idea. The initial management questions were to compare our focused outfall monitoring results among agencies and with areas that were not associated with outfalls. This was the focus for the first few Bight surveys.

Dave Williams: The Bay RMP became real for the NPDES community in 1993 when Steve Ritchie, who was then the Executive Officer of the San Francisco Bay Regional Water Board, made it a regulatory requirement to participate.

Kevin Buchan: The RMP began when Steve Ritchie issued a 13267. It was easily identifiable in the Bay Area who should contribute. The 13267 orders were issued for Bay dischargers inside the regional boundary of the San Francisco Bay Regional Water Board, even though some contaminants were coming in from the Delta.

Ken Schiff: Stormwater permittees in Southern California participate in the Stormwater Monitoring Coalition (SMC), which conducts a regional stormwater monitoring program that covers 17 major watersheds. Every permittee initially had a different requirement, but they came together, started a common design, and pulled in the Surface Water Ambient Monitoring Program (SWAMP).

However, the SWAMP doesn't do any of the monitoring itself. Individual programs do their own monitoring, The SWAMP only provides the coordination of the assessments, which involves three steps: 1) front end: a comparability assessment to ensure that everybody is aligned and all participants do monitoring the same way and have comparable QA/QC, 2) information management protocols, to be able to share data, and 3) the actual assessment piece. A subcommittee of the SMC Steering Committee that is also dealing with other aspects of the program is designated to conduct assessments, but all participants review the results and SCCWRP assists as needed.

Agricultural dischargers in Southern California are being integrated into RMPs through the ag waiver program. Because there are lots of individuals involved versus an agency or municipality, it is more challenging to get momentum and has been slow going. The approach taken is that the Regional Board starts small, by coordinating monitoring in individual watersheds and pulling in all agricultural interests in the watershed.

Another example that relates to agriculture is industrial stormwater monitoring. Permittees have voiced complaints about the monitoring they are required to do and on the other side there are Regional Board complaints about the low utility of the data this monitoring produces. A new permit template being considered includes language that allows permittees to contribute to/participate in regional monitoring in lieu of individual monitoring.

Funding

How is program funding arranged and how has it been negotiated and evolved over time?

Dave Williams: In the Bay Area, the fees for the POTW group of participating stakeholders are based on load factors for four metals. This method for allocating costs amongst the POTW community was decided by the POTW community themselves as a reasonable way to split up the costs back when the RMP Program was initiated. The fee structure may have to change, because the program focus has shifted away from the four metals that were the initial focus. The budget increases by about 2% each year, which is a very small rate of increase.

Kevin Buchan: Participants belong to any of six discharger groups, which also include the dredgers, such as the U.S. Army Corps of Engineers (Corps). Budgeting for each year is based on each discharger group's own loadings. Discharger groups each have a percentage of the fees, but the groups decide how to appropriate the fee amongst their members. The fees were very predictable and increases over time have been very moderate. The RMP has worked within its budget. Nobody wants to reevaluate the fee structure, even though it is based on a historical artifact of initial interest. The fee structure of negotiated, fixed shares of the budget by group provides predictability. It seems to work.

In the Bay RMP, most contributions are not in-kind but cash. Program participation for refineries is purely fee based. Refineries merely help to fund the assessment of the Bay as a whole. There is no in-kind contribution for refineries, but it is different for stormwater.

And if you are not a funding participant, you are not making decisions.

Ken Schiff: this is the same for the Bight Program. You need to make a contribution to vote. NGOs can participate in discussions but need to make contributions to have a vote.

Kevin Buchan: NGOs do not have a seat on the Bay RMP Steering Committee but can participate in technical groups.

Ken Schiff: We have NGOs on the Steering Committee, because they contribute effort like others and are operating at the same level of technical quality as everybody else. An example is monitoring questions associated with trash and debris. Every Coastkeeper association collects data, but they also have to get certified like other participants. We maintain scientific standards of data quality and NGOs would go through the same comparability studies if they want to provide services.

Questions drive everything in RMPs down south: determine the question first (1), then the best design to answer the question (2), then engage in some horsetrading to divvy up the design (3). The horsetrading among programs in terms of monitoring responsibilities prevents duplication and creates efficiency.

Joe Gully: The funding mechanism in the Bight Program is different than the Bay RMP. There are a number of ways to contribute and most contributions are in-kind (e.g. boat time, sampling effort, lab analyses). Several program activities are getting done in-kind but outside of stated permit requirements. The program's budget is somewhat flexible and add-ons to the program are difficult to budget for because they cannot be predicted with a long lead time. For some agencies, participation is a requirement in their permit, which makes it easier to justify the costs, and provides a more predictable scope and budget.

Ken Schiff: In the SMC, the SWAMP matches the sites of permittees 1:1, in order to leverage and get more information. Note that this is not exactly leverage by the SWAMP. Stormwater permittees' sites are primarily located in municipal areas, and the SWAMP will monitor sites more upstream or away from the main sites.

Dave Williams: SFEI is always looking for cost-effective ways to do some of the analyses. Larger POTWs bid on providing services and therefore get some of their fees back by providing analytical services.

Kevin Buchan: SFEI is leveraging the RMP by applying for additional grant funding.

Adam Olivieri: Supplemental grants through SFEI are not a given. The SFEI board gets involved because it needs to make sure a grant is consistent with the overall objectives of the organization.

How do you ensure you get your "money's worth" back from the program?

Joe Gully: One downside of the "decentralized" monitoring approach in the Bight Program is that it can cause the scope to drift away from our primary interests occasionally. It has sometimes been a challenge to ensure Bight data are relevant to us.

Kevin Buchan: One of the initial issues we had is that we needed data for both reasonable potential analysis and compliance, which are not the same. We had lots of complaints in the beginning about participating in terms of what we'd be getting out of it. It takes time.

Initially we struggled with the way the RMP is doing the sampling and questioned what its relationship was to our NPDES permits. The answer was often: nothing. However, monitoring is so much further ahead, if you get to the point where you do monitoring that has to do with the permit and also answers questions about the health of the resource.

Joe Gully: As participants we understand that the RMP collects data that individual permittees wouldn't measure otherwise. The dichotomy of NPDES compliance vs. health of the watershed is false: the point of a NPDES permit is to maintain the health of the watershed. The RMP monitors things you wouldn't normally measure, but you need those to get the picture of cumulative impacts. The point is looking at cumulative impacts and breaking down the silos of monitoring information; to document the changes, results, and the impacts.

Participation

What were the major hurdles for your constituency to participate and benefit from the program and how have they been overcome?

Joe Gully: We are still required to do our own routine monitoring, so we now do both, core monitoring and RMP participation. A factor that made our participation easier is that we had a cost-reduction in our own efforts by removing stations and parameters that didn't provide much value and reduced the monitoring frequency at some sites.

Coordination

How do you coordinate with other monitoring or assessment programs?

Adam Olivieri: One example is our own stormwater monitoring versus RMP monitoring. The Bay area has a regional stormwater permit and some of the requirements are covered by the RMP, but there are additional stormwater monitoring activities going on. We (BASMAA) leverage funding for the RMP and split the cost of ambient monitoring with SFEI. The individual stormwater programs monitor the nontidal reaches within streams, rotating the monitoring through the streams, and the RMP covers the saline reaches and waters of the Bay, but everybody is using the same quality assurance/quality control (QA/QC) and data formatting standards, so that the datasets can be combined.

Monitoring for the Bay area stormwater permits is done in lockstep with the RMP and all objectives and management questions in permits are tied together with those of the RMP.

Monitoring by the stormwater programs is done to evaluate permit compliance and the Bay RMP provides the umbrella for ambient monitoring, special investigations, and applied research. More specifically, the RMP manages Bay monitoring, does the synthesis of data for the Bay, and conducts special studies in the watersheds. For example, the loading work is done through the RMP. Stormwater fees in the RMP are split based on population and loading factors. The coordination for monitoring in the watersheds is run through BASMAA and done through the individual programs.

Joe Gully: this is similar to southern California, where permittees do some monitoring through the Bight Program and some on their own.

Ken Schiff: Whether in the regional ocean or a stream, there are three models for special studies: 1) make it a mutual priority, 2) run with it individually under the auspices of the RMP to give it more validity, and 3) get somebody involved from the outside. Number 3) is usually a win-win that works out for the academics brought in as well as for the program participants.

Kevin Buchan: We do essentially the same in the Bay RMP and we also have collaboration with other agencies and call it piggybacking. For example, when the USGS goes out and does a, b, and c, we ask, "While you're out there, would you mind doing d?" and we add d and get a lot of value for a small amount of money.

Program Operation and Management

What is the relationship/interaction between the oversight group (Steering Committee), the implementing entity (JPA, consultant, other nonprofit), and staff (Regional Board, consultants)?

Dave Williams: SFEI as an independent science organization plays a key role in the Bay RMP as the implementing entity.

Adam Olivieri: Even though the umbrella organization is SFEI, it is the RMP Steering Committee who generates the [Bay RMP multi-year plan](#). SFEI staff briefs the SFEI Board on projects, but decisions are made at the Steering Committee level.

Kevin Buchan: Program management by SFEI in the Bay is paid for by participant contributions to the program. SFEI is also doing a lot of the monitoring and this has been a valuable arrangement. For example, Lester McKee's group is going out sampling runoff during storm

events, even if that requires going out in the middle of the night on a weekend. We have a budget item for Lester's group to sample key events and an emergency fund. Use of the emergency fund for events that are not planned requires Steering Committee approval. The Steering Committee decided to provide extra funding from an emergency fund to augment these activities during a record wet year.

RMP operational decisions are not SFEI Board decisions.

Ken Schiff: This is similar for the Bight Program. There is the SCCWRP commission that is comprised of Regional Board Executive Officers etc. and oversees SCCWRP's operations but it is completely hands-off in terms of decision-making for the Bight Program, which is up to the planning and steering committees of the program. The committees are made up of those people who know the management issues, people like Joe Gully. Technical committees, which are the hands-on people, are the next level of governance. Planning committees ask for their recommendations. Initially, we had a program-wide planning committee, now we are delegating more to the workgroups. We also have an advisory group that gives early input.

Kevin Buchan: This is similar for the RMP, where the participants on the Technical Review Committee (TRC) and the technical workgroups decide if a project goes to the Steering Committee for funding. We set up an evaluation process through workgroups and TRC. All decisions happen at the Steering Committee level; but projects go through planning and technical committees and are evaluated through a process.

Ken Schiff: From a research science perspective, the Bight Program is boring to us SCCWRP scientists. SCCWRP gets value through all the add-ons and special studies. We almost dropped out of the program, but there was resistance by LACSD, the Regional Boards, and others, who said the Bight Program needs SCCWRP and asked themselves: how do we keep it interesting for them?

Kevin Buchan: A key function of the Bay RMP is to foster a collaborative environment among the Steering Committee and all the subgroups. This requires lots of collaboration with SFEI, since they are doing the work that needs to get done.

Ken Schiff: I was about to say that part of SCCWRP's role is to challenge the status quo.

Are TAC chairs / members paid or not and how is their participation organized and managed?

Adam Olivieri: We get inside and outside review, for example, by inviting experts in certain areas to participate in technical groups. Committee members and program participants are not compensated out of the RMP budget. The exception is when top experts in a field are brought in from somewhere. They receive an honorarium and travel cost compensation.

Kevin Buchan: The Bay RMP works as a huge brain trust and lots of different groups and experts want to participate. Individual organizations pay their own staff to participate. People are not compensated by the program for participating on committees; it's part of their own job requirements to participate and/or a discharger group pays for their own representatives, the exception being outside peer reviewers who are paid honorariums. We provide some stipends to compensate for their time.

Data Use

How is the data used that is produced by the RMP? Can you provide examples?

Adam Olivieri: Data are used to evaluate compliance with permit requirements.

Dave Williams: We are using RMP data in a regulatory context. POTWs in the Bay Area continue to do some individual receiving water monitoring, but they are mostly relying on the RMP for meeting their compliance monitoring requirements for receiving water.

The purpose of the Bay RMP is to inform management decisions. Priorities come from upcoming managing decisions the Regional Board will be making and/or related information needs. For example, RMP data are used for TMDLs and site-specific water quality objectives.

Criteria to evaluate potential RMP elements are whether they (1) address relevant NPDES permitting requirements, (2) support policies and decision-making, and (3) address scientific information needs

An example is the issue of nutrients, which are a concern because there are indications that the future Bay may be at risk for eutrophication. The San Francisco Bay Nutrient Management Strategy is a voluntary effort that was initiated through the RMP to have science drive regulations.

Joe Gully: Doing the first regional survey of the Bight allowed for comparing our outfall area results within the bigger regional condition context. We learned that water and sediment quality near our ocean outfall is comparable to the Bight as a whole.

Kevin Buchan: RMP data is used and evaluated in a way that impacts TMDLs and other regulatory issues. If RMP data show we have a problem in the watershed, but it's not originating in the watershed, we have discussions with regulators.

Monitoring

How are monitoring locations and frequency selected? Was there any “proving” the location was the right place to monitor?

Kevin Buchan: The original monitoring in the Bay was in fixed locations, but the RMP went through a technical review and has since evolved to have rotating stations. For example, the initial Bay RMP monitoring locations did not correspond to locations the refineries would have picked for background characterizations for their own purposes. Changing the sampling approach from fixed to rotating stations was a good move.

Adam Olivieri: We struggled with this issue. There were many educated people involved and still it took 10 years to sort out the stations and the quality of the data and the staff training for everyone to be comfortable. Then eventually the dischargers became more comfortable with the use of RMP data for regulatory purposes. We now use one set of data and it is an asset. We can now all agree on the data to use: here's the dataset, plus some supplemental info, for example San Jose, Palo Alto, Sunnyvale have been doing some individual studies, and here's the data analyses we want to do.

Wrap-up

What did you learn? What would you recommend? What would you do differently?

Joe Gully: One of the mistakes to avoid is to decide on the monitoring/management questions when people that ought to be involved are not at the table. A few years back the Los Angeles Regional Board added a requirement to our permit to implement the Santa Monica Bay Restoration's Comprehensive Monitoring Program. POTWs were an easy target for contributing to this effort, but we insisted that language be added that said we would only participate in monitoring those habitats where we have the potential for impacts, but not for assessing habitats like sandy beaches that we have no potential to impact. The agencies associated with the stressors in those habitats such as stormwater and beach managers were not at the table so to this day, none of that monitoring has been implemented. Make sure the right players are

at the table. The RMP language for our NPDES permits is not specific but our required monitoring should be related to where discharger impacts may be.

The primary stakeholders--dischargers and regulators--need to stay engaged. Participants need to develop very clear objectives and stick to them. Either you need to stick to them or, if priorities change, change the objectives in a process where everybody has an equal vote.

Dave Williams: The information gained through the RMP is better than what would be the result of everybody doing individual compliance monitoring. East Bay Municipal Utilities District (EBMUD) contributes \$200-260K per year. This is not a small budget effort, and EBMUD's receiving water monitoring wasn't that large to begin with, so it wasn't cost-neutral for us in the beginning. But the investment goes toward a very valuable, science-based program.

Adam Olivieri: There isn't much of a state share in funding the Bay RMP. That is something the Delta RMP could push.

The 3 Cs of the RMP approach are cooperation, collaboration, and communication. The Bay RMP's multi-year planning approach helps us looking ahead and thinking about what are we going to accomplish in 5 years. You will also need collaboration and communication on the back end with regulatory agencies, the other participants, policy deciders, and so forth. Patience is also necessary.

My advice is making sure to have the staff to make all that work when developing questions.

Joe Gully: Regarding the lack of a stronger funding base in the Delta in comparison to other regions and how to adapt: this can be dealt with by using representatives of vested industry groups as appointees to committees and workgroups and making sure they are engaged and knowledgeable.

Adam Olivieri: If you see the RMP being structured like a pyramid, there will be challenges with staffing all the committees, if you don't have expertise and resources for all aspects of the program. Some workgroups are ad-hoc. Using the Bay RMP as an example, you can also use certain resources through a larger group where interest exists and expertise is available, such as BASMAA or BACWA, but the appointed individuals need to know that they don't just represent, for example, EBMUD; they represent a group of small, medium, or large dischargers, etc. and need to also give feedback and have to report back to the group. It's an assignment.

Kevin Buchan: We also have SFEI that does a lot of the work for the Bay RMP. Think about how you want to structure the program, whether to have a group such as SFEI in charge or do all the detailed administration, operations, and management yourselves.

It is also important to have an evaluation process. Things change, and management questions change. First you want to have the overarching questions, and then have deeper ones you want to try to accomplish. They don't have to be complicated. Periodic reviews kept the Bay RMP fluid and helped participants not to get stuck on the initial requirements. For example, the planning cycle includes a 5-year program review.

You can't just draw on the Bay Area model and replicate it in the Delta. You have to decide what works for you. Start small, for example by smaller watershed groups throughout the Central Valley coordinating with each other. If you are doing receiving water sampling, you could bring that into the RMP. Resource sharing is worthwhile. And you'll need the Regional Board to make a push, but agriculture has been bullet proof in terms of regulatory leverage. One suggestion for agricultural groups would be to maybe just start coordinating with each other.

Ken Schiff: My programmatic advice is to start small with regards to the questions you are going to tackle. Know what the benefit is for each group. Only pick one topic or question and go from there. For example, when the Bight Program started, there were at first only 12 agencies involved. Now there are more than 100.

And here is a fresh perspective: you have already gotten over the biggest hurdle and you have gotten people together. Now it is just a function of people figuring things out. It is amazing how things have evolved over 10 years from no regulation for agriculture to the agricultural monitoring that is done now. The Delta RMP will be easy in comparison.

Delta RMP Draft Assessment Questions (12/13/13)

These draft assessment questions ~~are intended to~~ build on the information sheets for each candidate constituent category as well as subsequent discussion in Steering Committee meetings and with individual Steering Committee members and focus attention more narrowly on specific areas of concern. Note that the majority of the questions relate to improving baseline / background information. The draft questions below are based on discussion at the September 17 Steering Committee and subsequent phone and email conversations with several Steering Committee members.

Mercury

- How do levels of mercury / methylmercury vary between individual discharges and across discharge types?
 - Are there specific data gaps (e.g., agricultural discharges) that should be filled?~~What are levels of mercury / methylmercury in agricultural discharges to the Delta?~~
 - How a~~Are~~ levels of mercury / methylmercury in ~~different agricultural~~ discharge types changing over time?
 - Should the baseline for TMDL allocations be updated?
- What are the ambient levels of mercury / methylmercury, particularly in areas likely to be affected by POTW discharges and large-scale restoration projects?
 - How are mercury / methylmercury concentrations in Delta subareas affected by existing sources, activities, and events? Are there specific data gaps associated with particular water bodies or Delta subareas?
 - What will be the effects of in-progress and planned source control, restoration projects, and water management changes on ambient methylmercury levels in the Delta?

Toxicity / Current Use Pesticides

- What are the sublethal (e.g., growth, reproduction, biomarkers) effects of contaminants in the Delta?
 - What are the sublethal effects of contaminant mixtures at environmentally relevant concentrations associated with major landuse types (e.g., urban, agriculture)?
- What are the concentrations, loads, and distributions of current use pesticides implicated as potential causes of observed toxicity effects?
- Which current use pesticides in Delta waters pose the greatest risk of toxicity to aquatic organisms, and when?

These questions could be addressed with an adaptive approach that combines:

- Toxicity testing with organisms / markers selected based on best information about likely sources of toxicity
- TIEs to identify class(es) of chemicals primarily responsible for toxicity signal(s)
- Targeted chemistry to better identify likely constituents responsible for toxicity signal

Current Use Pesticides

~~See information for Toxicity, above. In that approach, chemistry sampling would be adaptive and targeted in response to findings from toxicity studies.~~

- ~~What are the concentrations and loads of current use pesticides entering the Delta from tributaries and from Delta islands?~~
- ~~Which current use pesticides in Delta waters pose the greatest risk of toxicity to aquatic organisms, and when?~~

Nutrients

- What are baseline loads of nutrients in POTW discharges?
 - How do loads change after implementation of nutrient control measures?
- What are ambient levels of nutrients in areas influenced by POTW discharges?
 - How do ambient levels of nutrients change after implementation of nutrient control measures?
- What are the concentrations and loads of nutrients entering the Delta from tributaries and from Delta islands and how do those loads impact concentrations in Delta sub-regions?
- How do ambient water quality conditions respond to progress in controlling sources and to planned scenarios of future source control actions, restoration projects, and water resource management changes?
 - How may nutrients have contributed to the pelagic organism decline (POD)?
 - How do nutrients drive eutrophication and associated effects (e.g., dissolved oxygen fluctuations, nuisance algal mats, altered aquatic food webs) in Delta sub-regions?

Pathogens (*Cryptosporidium*/*Giardia lamblia*)

- What is the influence of sources (agriculture, POTWs, stormwater, other) on pathogen levels at the intake pumps?
- What is the effect of source controls on pathogen levels at the intake pumps?

These questions could be addressed with some combination of:

- Coordination of existing monitoring, assessment, and modeling efforts
- Source tracking using genetic markers
- Infectibility studies
- Fate and transport models

Delta RMP Guiding Principles

Mission

The program's mission is to inform decisions on how to protect, and where necessary, restore beneficial uses of water in the Delta, by producing objective and cost-effective scientific information critical to understanding regional water quality conditions and trends.

Goals and Objectives

The primary goal of the Delta RMP is to provide coordinated Deltawide monitoring, reporting, and assessment of water quality, while pursuing the following objectives:

1. Improve the efficiency of water quality data collection and management in the Delta;
2. Generate products that inform and educate the public, agencies, and decision makers;
3. Raise awareness of Delta water quality conditions and how they impact beneficial uses;
4. Foster independent science, objective peer review, and a transparent review process;
5. Focus on the Delta;
6. Focus on the highest priority water quality information needs; and
7. Contribute to a holistic understanding of the Bay-Delta

Management Questions

Delta RMP participants have articulated core management questions that organize and guide RMP studies:

Type	Management Questions
Status and Trends	<p>Is there a problem or are there signs of a problem?</p> <ul style="list-style-type: none">a. Is water quality currently, or trending towards, adversely affecting beneficial uses of the Delta?b. Which constituents may be impairing beneficial uses in subregions of the Delta?c. Are trends similar or different across different subregions of the Delta?
Sources, Pathways, Loadings, and Processes	<p>Which sources and processes are most important to understand and quantify?</p> <ul style="list-style-type: none">a. Which sources, pathways, loadings, and processes (e.g., transformations, bioaccumulation) contribute most to identified problems?b. What is the magnitude of each source and/or pathway (e.g., municipal wastewater, atmospheric deposition)?c. What are the magnitudes of internal sources and/or pathways (e.g. benthic flux) and sinks in the Delta?
Forecasting Water Quality Under Different Management Scenarios	<ul style="list-style-type: none">a. How do ambient water quality conditions respond to different management scenariosb. What constituent loads can the Delta assimilate without impairment of beneficial uses?c. What is the likelihood that the Delta will be water quality-impaired in the future?
Effectiveness Tracking	<ul style="list-style-type: none">a. Are water quality conditions improving as a result of management actions such that beneficial uses will be met?b. Are loadings changing as a result of management actions?

Principles of Operation

The Delta RMP's Methods of Operation form the foundation of program activity.

- **Focus on the Delta:** The geographic scope of the Delta RMP encompasses the legal Delta (as defined by section 12220 of the Water Code), including water bodies that directly drain into the Delta, Yolo Bypass, and Suisun Bay. In addition, the base monitoring and special studies of the Delta RMP may extend upstream, if required to address specific management questions. Since Suisun Bay is outside the jurisdiction of the Central Valley Regional Water Board, sampling here will require coordination and collaboration with the San Francisco Bay RMP.
- **Focus on the highest priority water quality information needs:** A strategic planning process ensures that the Delta RMP focuses on the highest priority water quality information needs for beneficial use protection and restoration in the Delta.
- **Contributing to a holistic understanding of the Bay-Delta:** The Delta Science Plan will serve as a framework that contributes to a holistic understanding of the Bay-Delta and, thus, as a conduit for tying Delta RMP monitoring and assessment activities to the Delta Plan adaptive management approach.
- **Leveraging activities and resources:** the Delta RMP will leverage activities and resources by building on and partnering with existing programs, initiatives, and organizations to the extent possible. The Summary of Current Water Quality Monitoring Programs in the Delta (http://www.waterboards.ca.gov/centralvalley/water_issues/delta_water_quality/comprehensive_monitoring_program/draftfinal_deltamon_25nov09.pdf) and the

Central Valley Monitoring Directory (centralvalleymonitoring.org) provide information that might be helpful in identifying potential partners.

- **Clearly described and transparent processes and agreements** will guide the program governance and its operations. Following governance groundrules established by the Steering Committee, all stakeholders have the opportunity to participate in the RMP (see Figure 1: Organizational Chart for the Delta RMP). Documents describing committee roles and responsibilities, basic governance decisions (quorum, voting, participation), the overall development pathway flowchart (to be finalized), the strategic planning process (to be defined) and other governance groundrules and agreements are made available on the Delta RMP website (currently:
http://www.waterboards.ca.gov/centralvalley/water_issues/delta_water_quality/comprehensive_monitoring_program/index.shtml)
- **Adaptability and Flexibility:** Frequent committee and workgroup meetings and periodic program reviews will maintain the Delta RMP's capacity to adapt in response to changing management priorities and advances in scientific understanding. Pilot and special studies constitute a mechanism for responding quickly to new information and/or concerns, assessing new technical approaches, investigating particular questions that have defined scientific, management, or regulatory endpoints, and evaluating new directions for the RMP as a whole.
- **Collaborative culture:** Fostering a collaborative culture will enable participants to work together to address multiple competing and potentially conflicting interests (such as habitat restoration, flood protection, water supply, and human and wildlife consumption in fish) in an environment that encourages objectivity, consensus-building, and science-based decision-making.

Cost and Permit Changes

Comment [TJ1]: A.Discussing pending on issues of cost equitability and proportionality

The intent is for the initial implementation of the RMP to be cost-neutral for permittees.

Therefore, cost neutrality is a key principle guiding permit changes that will allow the shifting of monitoring resources from existing individual permit compliance to regional monitoring. Cost-neutrality refers to the overall cost of compliance for individual permittees. Additional important cost considerations are:

- Aim for cost savings collectively versus all current Delta monitoring costs.
- Seek funding partnerships.
- Each stakeholder type should develop its own cost function.
- Account for major in-kind contributions to program costs insofar as they translate into direct programmatic cost savings.
- Divide funding obligations into fixed costs for core program and variable costs for special studies.



Figure 1. Organizational Chart of the Delta RMP

Steering Committee

The core responsibilities and authorities of the Steering Committee (SC) are to determine the overall budget, allocate program funds, track progress, and provide direction to the Program from a manager's perspective. The SC will meet quarterly.

The Delta RMP Steering Committee is the key decision-making authority of the Delta RMP. The Steering Committee is responsible for establishing the RMP's strategic direction and the policies and procedures that govern its operation. The Steering Committee may direct RMP staff and/or advisory committees to assist in meeting the RMP's objectives and may delegate the day-to-day functions of the RMP to the RMP's implementing entity.

The Steering Committee authorizes the implementation of agreements among the participating members and, specifically:

1. Directs the fiscal/operating agent to request and receive federal, state, local, and private funds from any source and to expend those moneys to accomplish the Delta RMP's goals
2. Approves budgets and expenditures
3. Directs the fiscal/operating agent to enter into partnerships, contracts, and other legal agreements on behalf of the Delta RMP, as necessary to fulfill the Delta RMP's mission
4. Approves Delta RMP work products and any other plans, products, or resolutions of the Delta RMP
5. Sets priorities and oversee the activities of the Stakeholder and Technical Advisory Committees
6. Establishes and oversees the implementation of policies and procedures necessary to the day-to-day functioning of the Delta RMP

Membership on the Steering Committee will not diminish the regulatory responsibilities or authority of any participating agency or organization.

Technical Advisory Committee

Under direction of the Steering Committee, the Technical Advisory Committee (TAC) provides technical oversight of the RMP. It consists of technical representatives from the RMP membership groups, with technical and administrative support from RMP staff¹. The TAC makes recommendations to the Steering Committee based on technical evaluation of proposed or existing program elements. The Steering Committee then considers TAC recommendations in formulating their decisions. The TAC will meet as needed, at a minimum quarterly.

The responsibilities of the TAC are to:

- assist the Steering Committee in developing, reviewing, and revising the Delta RMP's monitoring and special studies in line with the management questions;
- report to the Steering Committee on technical issues as requested by the Steering Committee and guide the development of white papers as directed by the Steering Committee;
- select and convene subcommittees or workgroups to provide guidance on specific technical issues, with members drawn from both within and outside the TAC, as needed, to include specialized scientific or technical expertise not fully represented on the TAC;
- provide review and recommendations to the Steering Committee on project proposals with a technical component;
- provide review and recommendations to the Steering Committee on regulatory policies being considered for adoption that are technical in nature or have a strong technical component;

¹ Currently, staff from the Central Valley Regional Water Board and Aquatic Science Center have been specifically assigned to work on the Delta RMP and are funded by the State Water Board.

- and to provide technical review of the planning, development, and publication of RMP communication products, including the Pulse of the Delta report.

The TAC consists of experts in water quality, estuarine science, and related fields who are able to provide scientific opinions on the broad range of subject areas related to the Delta RMP's activities. Finally, TAC members work collaboratively to examine technical issues and develop advice and recommendations for the Steering Committee.

TAC Structure

TAC members will be drawn from RMP membership groups represented on the Steering Committee, but are not limited to these. Each designated SC member designates one person to sit on the TAC. If the TAC co-chairs foresee a need for additional expertise on the TAC, they may come back to the SC with a recommendation. Thus, the core membership of the TAC consists of technical representatives of the groups represented on the SC. Additional TAC members may be technical experts drawn from a variety of sectors, e.g. academia, NGOs, and government agencies.

Membership on the TAC is for a two-year term. The number of terms served by an individual is not limited but membership on the TAC must be renewed. The members of the TAC will appoint a Chair for a two-year term². A qualified Chair has a broad understanding of scientific issues in the Delta and can provide strong leadership, meeting management, and direction to the group.

Delta RMP staff (SFEI-ASC) will provide the communication link between the SC and the TAC.

Flexibility

² The exceptions are the initial TAC co-chairs chair, which were selected by the SC and charged with forming the TAC.

The TAC may recommend adding subgroups and experts as appropriate. If there is need for additional expertise, expert subgroups may be formed that report to the TAC. In addition, the TAC may advise ASC to convene appropriate science advisory panels and/or independent experts to provide science advice on specific projects, initiatives, reports, and studies.

Other Stakeholders

All meetings of the Steering Committee and Technical Review Committee are open to the public. Stakeholders that are not RMP participants will have the opportunity to weigh in by participating in meetings and providing additional project and product review. Stakeholders may also participate in specific technical subcommittees or workgroups.

DRAFT Initial TAC Assignment

A technical advisory committee (TAC) consisting of regional and national experts will be convened to develop a cost-effective monitoring plan for the initial implementation of the Delta RMP. The key tasks of this group are to identify:

- 1) the specific management questions to be addressed through monitoring,
- 2) conceptual frameworks and models for understanding processes relevant to the identified water quality management questions,
- 3) the specific information and/or data products needed to answer the management questions, and
- 4) the appropriate monitoring approaches required to produce this information and/or data products.

Specifically, the TAC will

- 1) conduct an assessment of critical monitoring needs, based on conceptual models and information needs,
- 2) develop monitoring designs, and
- 3) identify opportunities for collaboration with current and potential new partners in sampling, laboratory analysis, and data management aspects of implementing the monitoring program.

Technical support staff (SFEI-ASC), in collaboration with TAC and SC members, will draft a workplan including:

- Key management questions and monitoring information needs which will form the initial focus of the Delta RMP
- Updated conceptual frameworks/models describing system processes relevant to the Delta RMP water quality management questions
- Preliminary designs for monitoring, including specific immediate monitoring and assessment recommendations. This is the biggest step and is going to require specific sampling designs (station/time) and logistics plans (who, what,) etc.
- Preliminary funding and collaboration plan